

Remarks

Claims 1-10 are pending.

Claims 1-10 stand rejected.

Claims 1 has been amended.

Claims 1-10 are submitted herein for review.

No new matter has been added.

In the Office Action, the Examiner has rejected claims 1 through 10 under 35 U.S.C. § 103(a) as being unpatentable over Fischer et al. (U.S. Patent No. 6,349,004) in view of Geist (U.S. Pat. Pub. No. 2003/0030597).

Applicant respectfully disagrees with the Examiner's contentions and submit the following remarks in response.

The present invention as claimed in the amended independent claim 1 is directed to a light pipe for use in an electronic display arrangement. The pipe includes a transparent optical relay designed to transmit light signals from an entry surface receiving light from a micro display to an exit surface going toward the eye of a user for viewing a virtual image, as claimed and supported by the specification portion of the application.

In this arrangement, the present invention provides a light pipe with a diffractive component formed **directly on the entry surface of the light pipe**. Neither of the cited references teaches this feature, and thus no combination of the cited references discloses the present invention.

Turning to the prior art rejection, as detailed in the specification of the present application at paragraphs [0008] through [0011], Applicant discusses the cited Fischer reference stating:

U.S. Pat. No. 6,349,004 describes an optical arrangement for use in particular in an electronic display arrangement and designed to transmit light signals from one of its ends known as an entry surface to its other end known as an exit surface going towards the eye of a user in order to enable a virtual image to be viewed. That arrangement includes a diffractive component (26) which is an element satisfying the equation for an aspherical body of revolution. In that prior art arrangement, the optical arrangement is constituted by a plurality of optical elements that are assembled together and the diffractive component is constituted by a separate lens (24) which is placed in front of an assembly of optical elements, at the entry for light signals. *That embodiment using a plurality of elements or lenses is complex and expensive to assemble. The invention solves this problem by providing a light pipe that is made as a single piece and that can, for example, be fabricated by injection molding a plastics material while nevertheless providing an image that is large in size and of good quality.* (emphasis added)

Thus, Fischer does not have a diffractive component formed directly on the entry surface of the light pipe. Rather, Fischer's arrangement uses "a plurality of lens elements," (Fischer, at column 3, lines 62-65) rather than a light pipe as a single piece, and thus is complex and expensive to assemble. Fisher uses at least two lenses, including the diffractive component (Fischer, 26) on one lens (Fischer, 24), and other lens elements (Fischer, 22 and 23) with an entry surface for receiving light from the first lens and an exit surface going towards the eye of a user. On the Fischer arrangement, the diffractive component is not formed directly of the entry surface of a single piece light pipe.

The other cited reference, Geist, discloses a light pipe comprising support means (Geist, 61, 64) with optical elements, including deflection means 68, folding optic 101, near-eye optic 102, and refractive elements 67 and 69, placed inside the support means. Geist's light pipe does not have an "entry surface" equivalent to the entry surface of the present invention, because the micro display 100 of Geist is inside of the support means.

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As such, there is no teaching or suggestion in either of the cited references, either alone or in combination with one another, that disclose all of the elements of the present invention as claimed. For example, even if the references are combined as suggested by the Examiner, the resulting structure still does not disclose a light pipe being of a single piece, with a diffractive component formed directly on the entry surface of the light pipe's transparent optical relay. As noted above, neither Fischer nor Geist, nor any combination thereof discloses such a feature

For at least the foregoing reasons, Applicant requests that the rejection of independent claim 1 be withdrawn. Also, as claims 2-10 depend from claim 1, Applicant submits that these claims are allowable for at least the same reasons.

In view of the foregoing, Applicant respectfully submits that pending claims 1-10 are in condition for allowance, the earliest possible notice of which is earnestly solicited. If the Examiner feels that an interview would facilitate the prosecution of this Application he is invited to contact the undersigned at the number listed below.

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Respectfully submitted,

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